

ECFS - E-mail Filing - PROCEEDING - 09-47, 09-51, and 09-137 - DATE - 10/02/2009 - NAME - Ben Boyd, Vice President, Regulatory Affairs - ADDRESS1 - Aclara RF Systems, Inc. - ADDRESS2 - 30400 Solon Road - CITY - Solon - STATE - OH - ZIP - 44139 - LAW-FIRM - - ATTORNEY - - FILE-NUMBER - - DOCUMENT-TYPE - CO - PHONE-NUMBER - 3144822854 - DESCRIPTION - Email Comments - CONTACT-EMAIL - bboyd@aclara.com - TEXT -

CommentsNBP Public Notice #2. Dear FCC: FCC RFC question 1. Suitability of Communications Technologies. Smart Grid applications are being deployed using a variety of public and private communications networks. We seek to better understand which communications networks and technologies are suitable for various Smart Grid applications. With regards to deployed systems using private communication networks, Aclara has an installed base of over 5,000,000 metering endpoints currently operating on narrow-band UHF licensed channels in over 30 states including many large metropolitan areas such as New York City, Boston, Washington DC, Chicago, Corpus Christi, Orlando, Sioux Falls, Kansas City, Green Bay, San Francisco, Sacramento, Bakersfield, Fresno, and Seattle, . In addition, we have outstanding systems design proposals for nearly every state. Aclara believes that RF Licensed operations are the only way to provide guaranteed quality of service to our customers over the life of the system. FCC RFC question 2. Availability of Communications Networks. Electric utilities offer near universal service, including in many geographies where no existing suitable communications networks currently exist (for last-mile, aggregation point data backhaul, and utility control systems). We seek to better understand the availability of existing communications networks, and how this availability may impact Smart Grid deployments. The Aclara approach to Smart Grid deployment allows us to place low cost "collection units" at pole-top and building-top heights to provide an economic last-mile solution throughout our coverage area. These units use the licensed narrow-band UHF channel for endpoint connectivity, and then use any number of potential backhaul solutions such as cellular/1xRTT, fiber, Ethernet, WiFi, or even potentially another private, licensed high-speed backhaul solution (such as microwave links). FCC RFC Question 3. Spectrum. Currently, Smart Grid systems are deployed using a variety of communications technologies, including public and private wireless networks, using licensed and unlicensed spectrum. We seek to better understand how wireless spectrum is or could be used for Smart Grid applications. Aclara solutions are currently deployed using licensed spectrum in the UHF band for last-mile connectivity. If the FCC may consider allocating specific licensed channels to Smart Grid applications, Aclara's position is that there are many benefits to considering the UHF frequency band: solid penetration, low cost transmitters and receivers, large antenna apertures, non line-of-sight operations, and other good propagation characteristics for wide area coverage without needing a dense mesh-like infrastructure or high power operations. We feel strongly that the RF spectrum from 400MHz to 800MHz would be well suited for these applications. FCC RFC Question 4. Real-time Data. The Smart Grid promises to enable utility companies and their customers to reduce U. S. energy consumption using a variety of technologies and methods. Some of the most promising of these methods use demand response, in which utility companies can directly control loads within the home or business to better manage demand, or give price signals to

encourage load shedding. Other methods reduce energy consumption simply by providing consumers access to their consumption information, via in-home displays, web portals, or other methods. Central to all of these techniques is energy consumption and pricing data. While some applications in Smart Grid require low latency and high speed communications, the bulk of the traffic that we are currently carrying for our customers does not impose such demands on our network. Their primary use for our existing infrastructure is to economically gather billing information. Future applications such as distribution automation and grid management may require high speeds and low latency, and Aclara again believes that these requirements are best served by radio systems operating on licensed channels in order to guarantee quality of service and minimal latency. Unlicensed spectrum will most likely always suffer from latency and channel crowding issues. FCC RFC Question 5. Home Area Networks. We seek to understand the ways in which utilities, technology providers and consumers will connect appliances, thermostats, and energy displays to each other, to the electric meter, and to the Internet. Aclara anticipates that this will become a very commoditized industry, however the requirements for such small, local-area networks may best be served by radio networking architectures such as 802. 11a/b/g/n, already in wide deployment, at a very low cost, currently enjoying broad industry acceptance. Interconnectivity to these Wireless LAN's will provide the features and benefits of linking HAN devices to the Smart Grid without putting a burden or undue risk on the Smart Grid infrastructure. Aclara holds the position that these two networks serve different purposes, one of which is critical infrastructure and should be licensed, the other of which is non-critical and can operate well on shared unlicensed spectrum. Respectively Submitted, -- Ben Boyd Vice President, Regulatory Affairs Aclara RF Systems, Inc. 30400 Solon Road Solon, OH 44139 bboyd@aclara.com www.Aclara.com 314-482-2854 - Cell